

- 17 -

Claims

1. A butt joint connector for forming a butt joint  
5 between two building sheets, each respectively having a  
butt joint edge, comprising:  
a first plurality of attachment members for  
attachment to one of the sheets;  
a second plurality of attachment members for  
10 attachment to the other of the sheets so that the  
connector spans the edges of the respective sheets when  
the connector is attached to the sheets;  
connecting elements for connecting the first and  
second plurality of attachment members together in spaced  
15 apart relationship; and  
wherein the first and second plurality of  
attachment members define a concavity so that when the  
first and second sheets are connected to the abutment  
members, the sheets adjacent the edges are pulled towards  
20 the attachment members so as to define a recess adjacent  
the edges so that the recess can be finished with a filler  
to fill the recess and form the butt joint.
2. The connector of claim 1 wherein the concavity is  
25 an inverted V-shape.
3. The connector of claim 1 wherein the first and  
second attachment members comprise a plurality of  
transverse ribs, each rib having a first arm which forms a  
30 respective first attachment member and a second arm which  
forms a respective second attachment member, the first and  
second arms being inclined with respect to one another to  
form the inverted V-shape.
- 35 4. The connector of claim 3 wherein the first and  
second arms of each rib are arranged in the same plane.

- 18 -

5. The connector of claim 3 wherein the surfaces of the first arm are in a common first plane and the surfaces of the second arm are in a second common plane inclined with respect to the first plane.

5

6. The connector of claim 1 wherein the connecting elements comprise a plurality of longitudinal frame members for connecting the ribs.

10

7. The connector of claim 1 wherein a locator element is provided between the first and second arms at the apex of the inverted V-shape formed by the first and second arms for locating the edges of the sheets.

15

8. The connector of claim 1 wherein the connecting elements comprise a plurality of webs between adjacent ribs, each web having a first end and a second end connected to a respective one of the adjacent ribs, a hinge at the first and second ends for connecting the web to the respective rib, and an intermediate hinge between the first and second ends of each web, so that the connector is moveable between a collapsed position in which the web is folded and the adjacent ribs are side by side and an expanded position in which the ribs take up the spaced apart relationship by expansion of the webs about the hinges.

20

25

9. The connector of claim 8 wherein the ribs comprise a base which defines the inverted V-shape, a pair of side walls extending upwardly from the base and at least one gusset interconnecting the base and the side walls.

30

10. The connector of claim 8 wherein the hinges are integral hinges.

35

- 19 -

11. The connector of claim 8 wherein the connector includes locking elements for locking the connector in the expanded position.

5 12. The connector of claim 11 wherein the locking elements are formed on the webs.

10 13. The connector of claim 12 wherein the webs comprise a first arm connected to one of the ribs by the hinge at the first end, and a second arm connected to an adjacent rib by a hinge at the second end, the first and second arms being connected together by the intermediate hinge, the first arm having a free end and the second arm being connected to the first arm at the intermediate hinge  
15 inwardly of the free end, the free end having a first connector element and the second arm having a second connector element so that when the connector is expanded, the first and second elements engage to lock the web in the expanded position.

20

14. The connector according to claim 13 wherein the web includes a strut connected to one of the ribs at one end and to an adjacent rib by a frangible bridge at the other end to thereby space the ribs apart during moulding  
25 and in transportation and to hold the ribs in the retracted position, the frangible bridge being broken when the connector is moved to the expanded position and the first arm having a third connector for engaging the strut to facilitate holding of the web in the expanded position.

30

15. The connector according to claim 13 or 14 wherein the first and second connectors comprise engagable hooks.

16. A method of forming a butt joint between two  
35 sheets of building material having respective edges, the method comprising:

securing a connector, as defined in any one of

- 20 -

claims 1 to 15, to one of the sheets so the connector extends beyond the edge of that sheet and so the region of the sheet adjacent the edge is pulled towards the first attachment members of the connector;

5                   connecting the sheet to a first framework member;  
                  attaching the other sheet to the second attachment members of the connector so that the edges of the first and second sheet are adjacent one another and the second sheet is also pulled towards the second  
10 attachment member so that the sheets adjacent the edges form a recess; and  
                  connecting the second sheet to a second building framework.

15 17.           The method of claim 16 wherein the method further comprises finishing the joint by applying a filler to fill the recess.

18.           The method of claim 16 wherein the first sheet is  
20 connected to the connector prior to connecting the first sheet to the first frame member.

19.           The method of claim 16 wherein the second sheet is connected to the second frame member before the second  
25 sheet is attached to the connector.

20.           The method of claim 16 wherein the step of fixing the first and second sheets to the connector comprises screwing the sheets to the connector member.

30 21.           A building structure comprising:  
                  a first sheet connected to a first frame member;  
                  a second sheet connected to a second frame member, the first and second sheets having edges which are  
35 arranged adjacent one another;

                  a butt joint connector as defined in any one of claims 1 to 10 connected to the first and second sheets

- 21 -

between the first and second frame members and spanning the edges of the sheets, the first and second sheets being connected to the connector so that the first and second sheets adjacent the edges are pulled towards the connector to form a recess; and

a filler material applied to the recess to finish the butt joint between the first and second sheets.

22. The building structure of claim 21 wherein the sheets are connected to the connector by screws.

23. The building structure of claim 21 wherein the structure is part of a ceiling or wall.

24. A butt joint connector for forming a butt joint between two building sheets, each respectively having a butt joint edge, comprising:

a first attachment section;  
a second attachment section, the first and second attachment sections defining a concavity therebetween;  
a plurality of first connection locations on the first section, the locations being spaced apart in a direction transverse to a plane of the concavity;  
a plurality of second connection locations on the second section and being spaced apart in the transverse direction; and

connecting means for interconnecting the respective first and second plurality of connection locations.

25. The connector of claim 24 wherein the respective connection locations are located on respective arms of separate ribs.

26. The connector of claim 24 wherein the sections are planar sections and the locations defined by particular areas of the planar sections.

- 22 -

27.           The connector of claim 24 wherein the concavity is an inverted V-shaped.